Amendments to the Claims

This listing of claims replaces all prior versions and listing of claims, and listing of claims in the application.

1. (Currently Amended) A multivalent vaccine formulation for nasal administration comprising a recombinant hepatitis B virus surface antigen produced by Pichia pastoris, wherein the hepatitis B virus surface antigen is a mucosal immunoenhancer of soluble antigens, *Bordatella pertussis* whole-cell and inactivated poliovirus.

2. (Original) A multivalent vaccine formulation for nasal administration according to claim 1, where one of the formulation antigens is the hepatitis B virus surface antigen itself.

3. (Previously Presented) A multivalent vaccine formulation for nasal administration according to claim 1 where together with the hepatitis B virus surface antigen a number n of other antigens are included which receive an immunoenhancing effect due to their co-administration with HBsAg, wherein n is 1 to 5.

4. (Withdrawn) A multivalent vaccine formulation for nasal administration according to claim 1, where n comprises the tetnus toxoid antigen, which receives an immunoenhancing effect due to its co-administration with HBsAg.

5. (Withdrawn) A multivalent vaccine formulation for nasal administration according to claim 1, where n comprises the diphtheria toxoid antigen, which receives an immunoenhancing effect due to its co-administration with HBsAg.

6. (Withdrawn) A multivalent vaccine formulation for nasal administration according to claim 1, where n comprises a conjugate protein-polysaccharide corresponding to a vaccine antigen anti- *Haemophilus influenzae* type b, which receives an immunoenhancing effect due to its co-administration with HBsAg.

7. (Withdrawn) A multivalent vaccine formulation for nasal administration according to claim 1, where n comprises a conjugate protein-polysaccharide corresponding to polysaccharide C of *Neisseria meningitides* conjugated to a carrier protein, which receives an immunoenhancing effect due to its co-administration with HBsAg.

8. (Withdrawn) A multivalent vaccine formulation for nasal administration according to claim 1, where n comprises a conjugate protein-polysaccharide, in which the polysaccharide part corresponds to a vaccine polysaccharide of *Pneumococcus pneumoniae*, which receives an immunoenhancing effect due to its co-administration with HBsAg.

9. (Withdrawn) A multivalent vaccine formulation for nasal administration according to claim 1, where n comprises inactivated microorganisms as vaccine antigens, which receive an immunoenhancing effect due to their co-administration with HBsAg.

10. (Withdrawn) A multivalent vaccine formulation for nasal administration according to claim 9, where a vaccine antigen may be the bacterin *Bordetella pertussis*, which receives an immunoenhancing effect because of its co-administration with HBsAg.

11. (Withdrawn) A multivalent vaccine formulation for nasal administration according to claim 1, where n comprises inactivated virus as vaccine antigens, which receive an immunoenhancing effect because of their co-administration with HBsAg.

12. (Withdrawn) A multivalent vaccine formulation for nasal administration according to claim 1, where n comprises attenuated viruses as vaccine antigens, which receive an immunoenhancing effect because of their co-administration with HBsAg.

13. (Previously Presented) A multivalent vaccine formulation for nasal administration according to claim 3, where n comprises one or more of the following

antigens: tetanus toxoid antigen, diphtheria toxoid antigen, a conjugate protein-polysaccharide corresponding to a vaccine antigen anti-*Haemophilus influenzae* type b, a conjugate protein-polysaccharide corresponding to polysaccharide C of *Neisseria meningitides* conjugated to a carrier protein, a conjugate protein-polysaccharide wherein the polysaccharide part corresponds to a vaccine polysaccharide of *Pneumococcus pneumoniae*, the bacterin *Bordetella pertussis*, or mixtures of them, which receive an immunoenhancing effect because of their co-administration with HBsAg.

14. (Previously Presented) A multivalent vaccine formulation for nasal administration according to claim 1, comprising a final formulation volume ranging from 50 microliters to 2 milliliters.

15. (Previously Presented) A multivalent vaccine formulation for nasal administration according to claim 1, where the amount of antigen to be inoculated range from 0.1 micrograms to 2 milligrams.

16. (Previously Presented) A multivalent vaccine formulation for nasal administration according to claim 1, where the antigen mixture is dissolved in PBS, saline solution, water for injection or in any buffer solution used in medical practice or that allows the stability of the antigens.

17. (Previously Presented) A multivalent vaccine formulation for nasal administration according to claim 1, where the components are in a liquid or lyophilized state.

18. (Previously Presented) A multivalent vaccine formulation for nasal administration according to claim 1, where the administration is achieved with drops, a spray or pulverization.

19. (Previously Presented) A multivalent vaccine formulation for nasal administration according to claim 1, characterized by its use in humans or animals.

20. (Previously Presented) A multivalent vaccine formulation for nasal administration according to claim 1, characterized by its preventive or therapeutic use.

21. (Cancelled)